

ROLLER COASTER B – 2018

Rank: _____

Final Score: _____

Team Number: B____ Team Name: _____

Student Names: _____

4.a. The Roller Coaster, vehicle(s), tools, spare parts, and data/notes are impounded before the start of the competition. 1. Y N

Construction Parameters

3.a. The Roller Coaster is designed so that the vehicle will travel from a Starting Line to a Finish Line in as close to the given Target Time as possible. Y N

3.b. During operation, the device dimensions is ≤ 60.0 cm length x 60.0 cm width x 80.0 cm height Y N

3.c. The track is not enclosed at any point (e.g. funnels). Y N

3.k. Participants are able to answer questions regarding the design, construction, and operation of the device. Y N

ARE THERE ANY "NO'S" CIRCLED IN THIS SECTION? 7. Y N

Individual Runs

Run 1 Run 2

3.d. The vehicle is held in the ready-to-run position by a #2 pencil and is released when the participant removes the pencil from the track. Y N Y N

3.e. The vehicle travels using only its own gravitational potential energy available at the ready-to-run position. There is no additional energy by use of stored potential energy. Y N Y N

3.f. There is exactly one clearly labeled Start Line and one clearly labeled Finish Line running perpendicular to the direction of vehicle travel on the track. The Start Line and Finish Line position are not adjusted and both Lines are designated during impound before the target time is released. Y N Y N

3.g. The device has a mechanism to safely stop the vehicle after it crosses the Finish Line. Y N Y N

3.h. Magnets, electrical, and electronic devices are not used for any part of the Roller Coaster. Y N Y N

ARE THERE ANY "NO'S" CIRCLED FOR EACH RUN IN THIS SECTION? 8. Y N 20. Y N

The Competition

4.b. Once the participants enter the event area, they do not leave the area or receive outside assistance, materials, or communications. Y N Y N

4.d. If electronic levels are used, they are removed prior to a scorable run. Y N Y N

4.g. Prior to conducting a scorable run, the participants place the unused eraser of the #2 pencil they have been given on the Start Line of the device. The vehicle is placed behind the Start Line against the eraser. Y N Y N

4.h. A scorable run is declared prior to the start of the run. Participants do not touch the device during the scorable run. Y N Y N

ARE THERE ANY "NO'S" CIRCLED FOR EACH RUN IN THIS SECTION? 9. Y N 21. Y N

Run Parameters

3.i. Horizontal length of gap, rounded down to the nearest cm, and did the vehicle successfully reach the other side of the track? Gap 1 2. _____ cm 10. Y N 22. Y N

Gap 2 3. _____ cm 11. Y N 23. Y N

Gap 3 4. _____ cm 12. Y N 24. Y N

Gap 4 5. _____ cm 13. Y N 25. Y N

Gap 5 6. _____ cm 14. Y N 26. Y N

5.c. Device height, in cm, from the highest part of the device measured from the floor rounded down to the nearest cm. 15. _____ 27. _____

5.d. Run time, in sec, rounded down to the nearest second. Timer 1 16. _____ 28. _____

Starts on the word "Go" and ends when the complete vehicle crosses the finish line, one minute after the Timer 2 17. _____ 29. _____

word "Go", the vehicle travels outside of the boundary of the device, or the vehicle stops moving for 3 sec. Timer 3 18. _____ 30. _____

4.h.-i. Failed Run (e.g. the vehicle does not cross the Finish Line within one minute, starts before the event supervisor is ready, second run does not start within the 8 minutes). 19. Y N 31. Y N

Others

4.c. Target Time in seconds 32. _____

5.h.iv. Length and Width of the device in cm. Length 33. _____ Width 34. _____

General Rule. Disqualified (notify the team and their coach as soon as possible) 35. Y N